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September 12, 2006

TO: Commissioner for Patents

FROM: Andre L. Marais

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OUR REF: 2058.136US1FAX NUMBER (571) 273-8300

Document(s) Transmitted: Revocation and Power of Attorney & Change of Correspondence  
Address (1 pg.), Copy of Software / IP Purchase Agreement (10 pages).

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In re. Patent Application of: Sang K. Cha et al.Examiner: Baoquoc N. ToSerial No.: 09/768,301Group Art Unit: 2162Filed: January 25, 2001Docket No.: 2058.136US1

Title: Method and system for highly-parallel logging and recovery operation in main-memory  
transaction processing systems

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By: 

Name: Andre L. Marais

Reg. No.: 48,095

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**S/N 09/768,301****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****PATENT**

Applicant: Sang K. Cha et al.

Serial No.: 09/768,301

Filed: January 25, 2001

Title: METHOD AND SYSTEM FOR HIGHLY-PARALLEL LOGGING AND  
RECOVERY OPERATION IN MAIN-MEMORY TRANSACTION  
PROCESSING SYSTEMS

Examiner: Baoquoc N To

Group Art Unit: 2162

Docket: 2058.136US1

**REVOCATION AND POWER OF ATTORNEY**  
**CERTIFICATE UNDER 37 CFR § 3.73(b)****CHANGE OF CORRESPONDENCE ADDRESS**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In accordance with 37 C.F.R. Section 1.36, M.P.B.P. Section 402.05 and 402.07, please revoke any existing Powers of Attorney, if any, and appoint the following attorneys and/or patent agents to prosecute this application and to transact all business in the Patent and Trademark Office in connection therewith:

Customer Number: 21186

**CERTIFICATE UNDER 37 CFR § 3.73(b)**

SAP AG hereby certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of the following:

an assignment from the inventors filed 08/19/2002 and recorded on Reel 013210, Frames 0099-0101 and

a Software IP Purchasing Agreement executed June 13, 2006 between TIM System, Inc. and SAP AG, attached herewith. To the best of my knowledge and belief, title is in SAP AG, the assignee.

Pursuant to 37 C.F.R. § 3.73(b) I hereby declare that I, Guenther Schmalz, am empowered to sign this certificate on behalf of SAP AG, the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true.

Please direct all correspondence in this case to:

Schwegman, Lundberg, Woessner & Kluth, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
Telephone No. (612)373-6900  
Customer No. 21186

Date

01 SEP 2006

By

  
Guenther Schmalz

Global Operations Counsel, SAP AG

**Software/ IP Purchasing Agreement**

between

SAP AG  
Dietmar-Hopp-Allee 16  
69190 Walldorf  
Germany  
(hereinafter: SAP or the "Purchaser")

and

TIM System Inc.  
133-405, Automatic System Bldg. of Seoul National University  
San 56-1, Sillim-dong, Kwanak-gu, Seoul, Korea  
(hereinafter: TIM or "the Seller")

**§ 1 Purpose of the Agreement**

1. TIM owns all intellectual property assets and rights related to the software described in Appendix 1 (referred hereinafter as "Software").

2. TIM wishes to assign to SAP all of its rights and interest in and to the Software as the Software exists as of the date hereof.

3. This Agreement comes into effect as of June 1, 2006 ("Effective Date").

**§ 2 Transfer of rights**

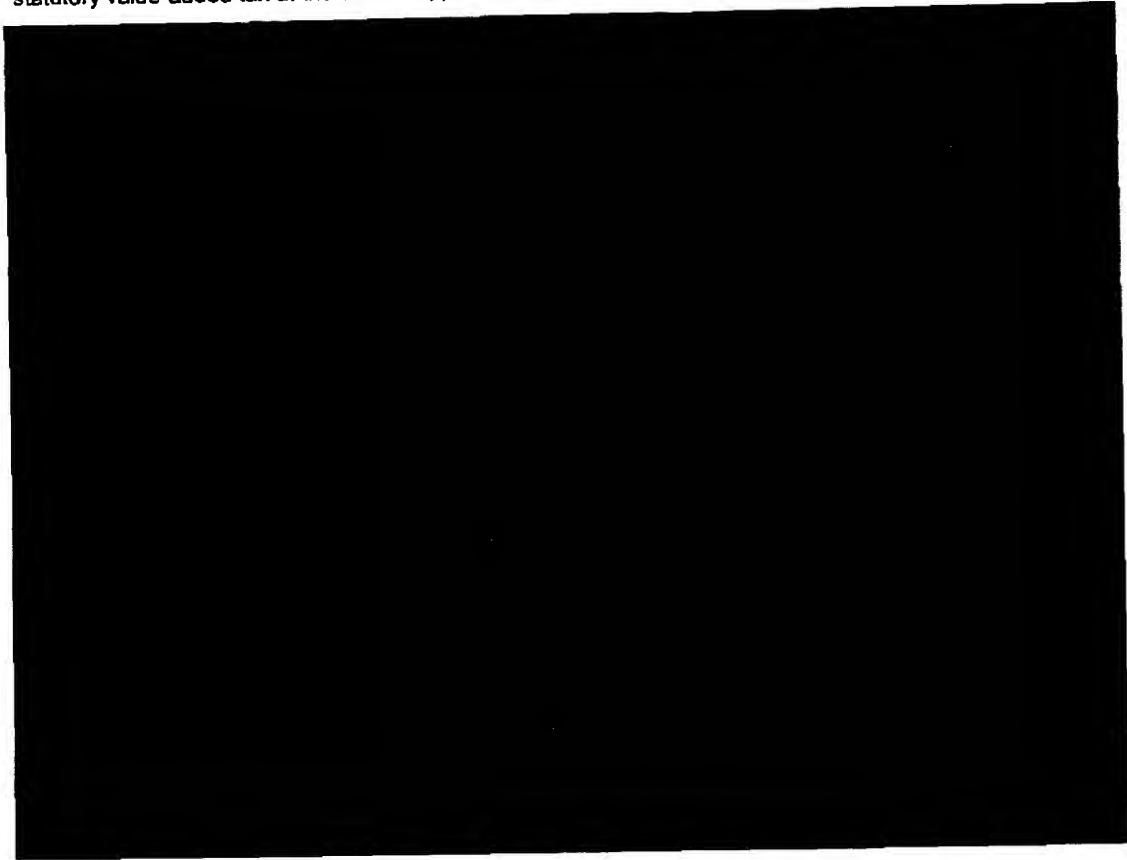
1. TIM hereby assigns, sells and transfers to SAP all of its rights, title and interests in and to the Software and all associated intellectual property including, but not limited to, all copyrights and patents (registered and unregistered), all trade secrets, and all inventions and pending and issued patents relating to the Software. The assignment is effective as of Effective Date. TIM shall deliver to SAP promptly electronic copies of all source code, object code and documentation, comprising the Software. SAP herewith accepts such assignment, sale and transfer.

2. TIM and SAP agree to execute and deliver to the other party any further instruments that may be required to confirm the assignment set forth above.

3. TIM represents and warrants that it is the owner of the Software, including all intellectual property rights thereunder, copyright, patent, trademark, trade secret and other applicable law.

### § 3 Remuneration

1. SAP shall pay TIM for the transfer of rights under this Agreement the net amount not containing VAT of [REDACTED] If applicable, this payment is subject to statutory value-added tax at the current applicable rate.



### § 5 Confidentiality

Either party agrees to keep strictly secret all business and trade secrets of the other party and to refrain from reproducing, storing, using or disclosing any such confidential information other than for the purpose of executing this Agreement. Corresponding duties of care and secrecy shall be contractually imposed on all employees and other persons under the control of either party. No confidentiality obligation shall exist to the extent that information (a) has already become rightfully known to the other party prior to the disclosure by either party; or (b) is or becomes publicly known; or (c) is rightfully obtained by the other party from a third party without similar restrictions and without breach of this confidentiality obligation; or (d) is independently developed by the other party without breach of this confidentiality obligation.

## § 6 Liability

1. SAP shall only pay compensation for damages arising from whatever cause in law, e.g. non-fulfillment, impossibility, delay, culpa in contrahendo, violation of collateral duties, or tort as follows:



2. A limitation period of one year shall apply to claims made by the recipient on the basis of non-performance, impossibility, delay, culpa in contrahendo, breach of collateral duties, or annulment of the contract. This limitation period shall begin when the recipient becomes aware of the claim.

## § 7 General

1. All notices shall be in writing and delivered personally, by mail or via facsimile. All notices shall be addressed to the addresses appearing in the introductory section of this Agreement and shall be deemed delivered upon receipt. Each party may change its address by written notice in accordance with this section.

2. This Agreement may only be modified in writing by TIM and SAP. This also applies to any waiver of this written form requirement.

3. The failure of either party to this Agreement to object to any conduct of the other party that is in violation of the terms of this Agreement shall not be construed as a waiver thereof, or as waiver of any future breach or subsequent wrongful conduct.

4. This Agreement, including all attachments, shall represent the entire understanding between the parties hereto and supersede any and all prior proposals or agreements, whether written or oral, that may exist between the parties. No oral side agreements exist.

5. This Agreement shall be governed by and construed in accordance with the laws of Germany without reference to the conflicts of law principles. This Agreement shall not be governed by the United Nations Convention of Contracts for the International Sale of Goods, the application of which is hereby expressly excluded. Exclusive venue for all claims arising out of or in connection with this Agreement shall be Frankfurt am Main, Germany.

6. If a court finds any provision of this Agreement invalid or unenforceable, this shall not affect any other provision of this Agreement.

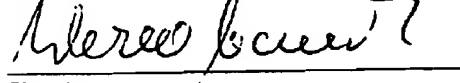
7. Both parties represent that they are independent contractors in performing all obligations hereunder, and nothing contained herein shall be deemed or construed to create any employer/employee relationship or any partnership or joint venture between the parties or their respective directors, officers, employees, or independent contractors.

8. Unless otherwise provided for in this Agreement, neither party shall transfer, assign or sublicense its rights or obligations under this Agreement to any other third party, in whole or in part, without the prior written consent of the other party, which consent shall not be unreasonably withheld. Assignment in whole by either party to its respective parent organization is permitted without written consent of the other party.

Walldorf, June 13, 2006

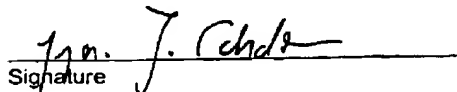
Seoul, June 14, 2006

SAP AG

  
Signature

Name: Werner Brandt


Title: Chief Financial Officer

  
Signature

Name: Jochen Scholten

Title: Associate General Counsel

TIM

  
Signature

Name: EN Han

Title: Managing Director

  
Signature

Name: Jae Sam Lee

Title: COO

### Appendix 1 Description of Software

*This description of Software does not claim to be conclusive and shall be amended by mutual agreement of the parties in order to reflect the status of IP ownership of TIM Korea as of Effective Date.*

#### All versions of "P\*Time":

TIM has developed a memory-centric database management system enabling real-time enterprise intelligence, called P\*TIME.

Product & Version
P*TIME 1.0
P*TIME 2.5
P*TIME 3.0
P*TIME 3.1
P*TIME 3.2
P*TIME 3.3

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#### Company Registered Intellectual Property:

##### Registered Patents:

Title	Owner	Countries	Patent #	Filing date	Patented date	Comments
Method and System for Highly-Parallel Logging and Recovery Operation in Main-Memory Transaction Processing Systems	Subsidiary	Korea	390,853	6/7/2000	6/27/2003	"Differential logging"
		EU (Germany, UK, France, Sweden, Swiss)	1320802	12/3/2001	3/30/2005	
		China	ZL 00819629.X	12/6/2002	6/8/2005	
		US	7,065,537	1/25/2001	6/20/2006	"Differential Logging"

**Filed Patent Applications:**

Title	Owner	Countries	Application #	Filing date	Comments
Method and System for Highly-Parallel Logging and Recovery Operation in Main-Memory Transaction Processing Systems	Subsidiary	USA	09/768,301	1/25/2001	USA Issued (see above) "Differential logging"
		Japan	2002-503047	12/9/2002	
Cache-Conscious Concurrency Control Scheme Using Index Structure for Managing Main-Memory Database Systems	Subsidiary	Korea	2001-32319	6/9/2001	"OLFIT"
		USA	10/162,731	6/4/2002	
		EU	2733558.7	11/30/2003	
		China	2811301.1	12/8/2003	
Compression Scheme for Improving Cache Behavior in Database System	Subsidiary	Korea	2001-10780	3/2/2001	"CR Tree"
		USA	10/087,360	3/1/2002	
Parallel Logging and Restart Method and System Based on Physical Logging in Main-Memory Transaction Processing System	Subsidiary	USA	10/195,822	7/15/2002	"PROL"
		EU	2749411.1	1/14/2003	

**Registered Domain Names:**

Domain Name	Registrant	Administrative Contact	Registrar	Registered Date	Expiration Date
ptime.com	Subsidiary	Changbin Song	gabia.com	07/23/2003	07/23/2006
transactinmemory.com	Subsidiary	Changbin Song	gabia.com	12/21/2000	12/21/2005
ptime.co.kr	Subsidiary	Changbin Song	gabia.com	08/24/2004	08/24/2006

**Copyrights:**

The Company has two manual sets for P\*Time 3.2 and P\*Time 3.3 that are copyrighted.



**Unregistered Trademarks:**

Name	Owner	Country	Date of First Use	Evidence of P*TIME sales, marketing, and use
P*TIME	Subsidiary	Korea	5/23/2002	Samsung Electronics Purchase Order
	Subsidiary	US	11/8/2004	SGI Announcement of P*TIME as partner product at Supercomputing 2004 Exhibition in Philadelphia
	Subsidiary	Japan	3/16/2004	P*TIME embedded in Contela's wireless office switch systems operated by a Japanese telco.

**TIM Patent and Application Status**

P\*TIME employs a set of patent-pending innovations in logging, recovery and concurrency control to fully exploit the memory of multiprocessor systems.

This attached list of inventions and respective patent application does not claim to be conclusive and shall be amended by mutual agreement of the parties in order to reflect the status as of Effective Date. For the avoidance of doubt, any innovations not listed, but filed before June 1, 2006, are deemed to be part of this list and will be amended accordingly.

Title of the Invention	Inventors	Application No.	Status	Comment
A method and System for Highly-Parallel Logging and Recovery Operation in Main-Memory Transaction Processing System (Korean Application)	Sang K. Cha Kihong Kim Juchang Lee	- 2000-31166 filed 6/7/2000 - Assignment filed with Korean patent office (according to the joint research agreement between SNU and the Subsidiary, which assigns all inventions to the Subsidiary)	- Granted Korean Patent # 390,853 (6/27/2003)	"Differential Logging" Korean Agent: KCL (Korean Patent Law Office)

A method and System for Highly-Parallel Logging and Recovery Operation in Main-Memory Transaction Processing System (PCT Application)	Sang K. Cha Juchang Lee Kihong Kim	- PCT/KR00/01542 filed 12/28/2000 - Assigned to the Subsidiary (b/c the Subsidiary is Applicant) - EU Application # 987814.1 (12/3/2001)	- Granted EU Patent # 1320802 (3/30/2005) Entered national phase of UK, Germany France, Sweden and Swlss - Granted China Patent # ZL 00819629.X (6/8/2005) - Japan Patent Pending (Appln # 2002-503047)	"Differential Logging" PCT Agent: KBK (Korean Patent Law Office)
A method and System for Highly-Parallel Logging and Recovery Operation in Main-Memory Transaction Processing System (US Patent Application)	Sang K. Cha Juchang Lee Kihong Kim	- 09/768,301 filed 1/25/2001 - Inventors' assignment to the Subsidiary recorded in US PTO (Reel# 013210, Frame# 0099)	- Pending - Final rejection issued based on Sec 112, a formal rejection, not a substantial novelty rejection, which can be overcome by correcting written description (7/14/2005) - Response is being prepared.	"Differential Logging" Agent: US Agent of KBK Office
Compression scheme for improving cache behavior in database systems (Korean Patent Application)	Sang K. Cha Kihong Kim Keunjoo Kwon	- 2001-10780 filed 3/2/2001 - Assigned to the Subsidiary (b/c the Subsidiary is Applicant)	- Pending	"CR-Tree" Korean Agent: KBK Office
Compression scheme for improving cache behavior in database systems (US Patent Application)	Sang K. Cha Kihong Kim Keunjoo Kwon	- 10/087,360 filed 3/1/2001 - Inventors' assignment to the Subsidiary recorded in US PTO (Reel# 013212, Frame# 0080)	- Pending - Restriction requirement issued (3/8/2005) - Response has been filed 9/5/2005	"CR-Tree" US Agent: CK Ko (US Patent Attorney)

Compression scheme for improving cache behavior in database systems (PCT Application)	Sang K. Cha Kihong Kim Keunjoo Kwon	- PCT/KR02/00378 filed 3/5/2001 - Assignment to the Subsidiary (b/c the Subsidiary is Applicant)	- Withdrawn	"CR-Tree" PCT Agent: KBK Office
Cache-Conscious Concurrent Control Scheme for Database Systems (Korean Patent Application)	Sang K. Cha Sangyong Hwang Kihong Kim Keunjoo Kwon	- 2001-32319 filed 6/9/2001 - Assigned to the Subsidiary (b/c the Subsidiary is Applicant)	- Pending	"OLFIT" Korean Agent: KBK Office
Cache-Conscious Concurrent Control Scheme for Database Systems (US Patent Application)	Sang K. Cha Sangyong Hwang Kihong Kim Keunjoo Kwon	- 10/162,731 filed 2002.06.04 claiming priority of provisional 60;296,870 filed 6/8/2001. - Inventors' assignment to the Subsidiary recorded in US PTO. (Reel#013210, Frame# 0116)	- Pending - Restriction requirement issued. (3/14/2005) - Response has been filed 9/10/2005	"OLFIT" US Agent: CK Ko
Cache-Conscious Concurrent Control Scheme for Database Systems (PCT Application)	Sang K. Cha Sangyong Hwang Kihong Kim Keunjoo Kwon	- PCT/KR02/01060 filed 6/4/2002 - Assigned to the Subsidiary (b/c the Subsidiary is Applicant) - EU Application # 2733558.7 (11/30/2003)	- EU Patent Pending (Appln # 2733558.7) - China Patent Pending (Appln # 2811301.1)	"OLFIT" PCT Agent: KBK Office

Parellelized Redo-Only Logging and Recovery for Highly Available Main Memory Database Systems (US Patent Application)	Sang K. Cha Juchang Lee Kihong Kim	- 10/195,822 filed 7/16/2002 - Claiming priority of provisionals 60/305,956 60/305,947. - Inventors' assignment to the Subsidiary recorded in USPTO. (Reel#013212, Frame#0077).	- Pending - Non-final rejection has issued. - Response has been filed (10/20/2005). - Note that the PROL feature is not directly related to the Subsidiary's P*TIME implementation.	"PROL" US Agent: CK Ko
Parellelized Redo-Only Logging and Recovery for Highly Available Main Memory Database Systems (PCT Application)	Sang K. Cha Juchang Lee Kihong Kim	- PCT/KR02/01341 filed 7/16/2002 Claiming priority of provisionals 60/305,956 60/305,947 - Assigned to the Subsidiary (b/c the Subsidiary is Applicant) - EU Application # 2749411.1 (1/14/2001)	- EU Patent Pending (Appln # 2749411.1)	- "PROL" PCT Agent: KBK Office

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